



## SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1966

A NON-PROFIT AMATEUR TECHNICAL ORGANIZATION DEDICATED  
TO THE ADVANCEMENT OF COMMUNICATIONS ABOVE 1000 MC.

### W6IFE Newsletter

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The 2 **November** 2000 meeting of the SBMS will be about 74 GHz with some equipment and a video to show. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1900 hours local time on the first Thursday of each month. Check out the SBMS web site at <http://www.ham-radio.com/sbms/>.

Welcome to new members George Schrock, KF6NVO of Hesperia; Chuck Olive N6EQ of Corona; Bill Heather, KB6WKT of Norwalk; Chris Williams, WB6HGW of Hollywood; and Eric Wasserman, KE6RCI of Ventura. I have been off Boy Scouting and doing Microwave Update 2000 so I can't say much about meeting happenings this time. Lots of folks have been doing things so much this newsletter comes from them. Bill

Prez Sez What a great contest! Thanks to everyone who made the effort! Even the ones who set up and didn't get on the air. It is a long process and can be a bumpy road. However, I think as a club we will end up having made an impressive effort. I can't wait to see the results.

I have been wandering around the internet looking for sites with millimeter stuff on them. The results are that I notice that Europe is going full steam and the East coast it doing well. There doesn't seem to be much from our end of the country. While we have record setting stations on 24 GHz and several other very good ones on 24 GHz narrow band, we need to have a few people working on higher frequencies. If all the people who have stuff for 47 and 75 work together, they may be able to have at least two stations on for next year. I am at the point where all I need to do is the DC wiring for a functioning 47 GHz narrowband transverter. Anyone else out there game? Anyone want to participate by helping? Doug

Scheduling-

7 December 1296 MHz EME equipment and challenges

4 January 2001 PSK 31 the new narrowband mode for Microwaves?

1 February 2001 TBD

More from the 10 GHz contest

Glenn, KE6HPZ: I had 87 Q's, 29 different call signs, and a total of 16,014 Points. I did better than last year's contest by about 20 percent. I got to get that Ma-Com unit to like cooler temperatures in the evening; I would have had several more Q's. My unit loves 100 degree + temperatures, but hates 70 degree temperatures. I have to open it up on Frazier this weekend and do a little adjusting now that it has cooled down, or throw the unit in the ref for a while and then re-adjust it. Oh well.

Bill, WA6QYR: I was able to get out only part of a day, so went to Bird Springs Pass area 6000 ft DM05wm for about 6 hours. I had 17 contacts with 15 stations with the best DX being to Robin, WA6CDR in CM88qp for 529 km. The TWT died before I got started, so I only had 250 mw on 10 GHz with my 4 ft dish and a few dB NF front end. It was too short of time available to me.

During the contest a new North American record of 375 km was set on 24 GHz by Gary AD6FP on Frazier Mtn., DM04ms to Ron, K6GZA on Mt. Oso, CM97hm using 4 ft dishes, 500 mw/ 100 mw power levels and 4 dB /5 dB NF resulting in good S5 SSB signals. Gary had a dual 10 GHz / 24 GHz feed and locked LO's so all he had to do was switch rig inputs following a line up and contact on 10 GHz (30/9 signals). Ron's setup allowed just switching the transverter without having to change the pointing position. Congratulations guys.

Stuff of interest&emdash;

This site will provide the latitude and longitude from an address as vague as a zip code.

<http://www.geocode.com/eagle.html-ssi>. Frank WB6CWN

Finally got a quickie write-up on laser dish checking. I have been using it to check out some of the P-Com dishes. see: [http://www.ham-radio.com/n6ca/appnotes/dish/dish\\_lzr.html](http://www.ham-radio.com/n6ca/appnotes/dish/dish_lzr.html). 73 Chip N6CA

I finally got DSL and I finally down loaded all 13 Megabytes of the SBMS website without taking a week and a half to do it so I could finally get ALL of the current files without messing anything up so I am finally able to finally up load all of the newsletters without messing anything up (I already said that) so you can finally read all of the newsletters. I also made some other updates.....whew. We even have the president's name & call correct. Send me some X-band contest pictures and we can get them up as well, via

snail mail or jpeg medium compression. Let me do ALL processing.....73 finally...Chip N6CA

Jerry, WA6VLF reports that the San Diego Microwave Beacon on 10368.030 MHz (cw) and 10248 MHz (wbfm) has been temporarily relocated for test purposes. The temporary test site is at 32 deg, 36.865 min. North and 116 deg, 50.642 min. West. This is in grid square DM12NO. This is expected to be a short-term test and this info is disseminated so that you do not assume that the signal comes from the former location.

The 10 GHz all-mode repeater remains off the air until further notice. 73s from Ed, W6OYJ (858) 453-4563

Lots of gear to move---

I have a pair of rectangular parabolic reflectors available for free pick-up in Thousand Oaks. These are the kind seen mounted to a pole pointed to the sky at gas stations around town. In fact, I got them on the scrap

pile of several demolished stations. They are complete with hardware ready to mount on a pole and there's even a mounting bracket out to the feed point. Might be useful for someone setting up a wideband fixed link. Contact me if you are interested. Frank WB6CWN Day 805 375-2890

I'm looking for about 6 to 10 feet of 10 GHz flexible waveguide? Any hiding out in your garage. I worked the contest using Andrews 1/2 inch & now appreciate flex. 73. Kurt - K6RRA

For Sale: An RF probe for the HP 410C, with good tube and HP 11342 adaptor for coax cables with N connectors. This assembly allows you to measure RF power from nearly the kilowatt level at some frequencies to milliwatts using the 410C. The 1132 will also work with the 410B, as will the tube. \$100 plus shipping 562.424.3737 Doug, K6JEY

Tektronix's own service department suggested the source below for out of print Tek manuals. You can search their inventory online. This is information, not an endorsement Frank WB6CWN

<http://www.manualsplus.com/>

Gary, K6CYS has a 6 foot Andrews aluminum, and an 8 foot brand X aluminum with mount bracket that he would like to donate to someone who can use them. For pickup only. He is in San Diego and can be contacted at [overturf@cts.com](mailto:overturf@cts.com). 73 Jack N6XQ

The Western States Weak Signal Society 6th Annual Conference Proceedings is now available until Dec 16, 2000 for \$15.00 postage paid in the USA and \$20.00 US for International orders. Include mailing address and e-mail address with your order. See table of contents below.

50 MHz F2 Propagation Mechanisms; J.R. Kennedy, K6MIO/KH6

Microwave Weak Signal; Dave Glawson, WA6CGR

PSK31 Primer for VHF Weak Signal Enthusiasts

A Field Programmable Beacon ID'er; Jack Henry, N6XQ

Combining Antennas with 50 ohm Coax; Jack Henry, N6XQ

Meteor Scatter Basics; Patrick Coker, N6RMJ

SB 230 Amplifier; Mike Goshay, W6WE

An Introduction to APRS; Greg Noneman, WB6ZSU

Low Noise Crystal Oscillators; John B. Stephensen, KD6OZH

50 MHz Noise Canceling Receiver Front End; Chip Angle, N6CA

MUF Antenna for Six Meter DXing; Chip Angle, N6CA

50 MHz Terminating Low Pass Filter; Chip Angle, N6CA

30 Watt 50 MHz Beacon; Chip Angle, N6CA

144 MHz Band Pass Filter; Chip Angle, N6CA

Western United States Beacon List

WSWSS Membership List

We also have several 1997 WSWSS Conference Proceedings available to anyone purchasing the 2000 Proceedings for an additional \$5.00 as long as supplies last. Single copies of either are \$15.00 Table of Contents listed below.

A Single-Board Transverter for 5760 MHz and Phase 3D; Paul Wade, N1BWT

Rewinding Coax Relays for 12 Volt Operation; Paul Wade, N1BWT

A "Fool-Resistant" Sequenced Controller and IF Switch for Microwave Transverters; Paul Wade, N1BWT

6 Meter EME-Past, Present & Future; Robert Magnani, K6QXY & Allen Ferrer, WA6MXI

A 144 MHz Amplifier using the Svetlana 4CX800A; Alfred Green, NU8I>

Introduction to GPS and Differential GPS; Arthur Lange, W6RXQ

A Luxury Linear; Mark Mandelkern, KN5S (now K5AM)

Design Notes for "A Luxury Linear" Amplifier; Mark Mandelkern, KN5S (now K5AM)

Troposcatter Inside and Out: Everyday VHF, UHF, and SHF Propagation for DX; Palle Preben-Hansen, OZIRH

Troposcatter at 50 MHz : 700 km QSO's Any Time; Palle Preben-Hansen, OZIRH

Author Bios

Send to WSWSS Proceedings P. O. Box 332 Midway City, CA 92655-0332

My friend, Phil Gabriel has need for 2 macom 27 in. dishes with tub, or a pair of the 30 in (Reuters news service etc.) dishes. If anyone out there has these, Phil will pay up to \$300 each for them. These are for a project at Colorado State where he works. Let me know if you or anyone in SBMS can supply these dishes. 73, Phil, W6HCC 970-568-0024 pwlmmml@compuserve.com or Gabriel 303-490-1865.

A Report from the 2000 Microwave Update at Trevoise PA.

This was a great trip to see a number of our members on the east coast. This was my first time at an "Update", so a lot of things were new. Having all microwave (1200 MHz and up) talks was wonderful.

The flea market had lots of nice parts to buy (some high priced for my budget), but I managed to come home on the airlines with suitcases full of stuff and an extra carry-on full of goodies. I just wonder what the x-ray guy thought seeing all these strange shapes in the luggage? There were lots of 24 GHz modules, but little WR-42 waveguide. Will, W0EOM was there with some of his collection of parts on 47 GHz and above. There were some 180 people registered and 150 at the banquet. The break time auctions collected up a lot of bucks on a few special items like 4 w 5760 amplifiers the 3 JA's donated to the treasure chest. There is a 24 GHz amplifier in the works by an east coast group featuring 1 w power level, 40 dB gain, and 2.5 dB NF. It has different people building sections like bias board, waveguide or coax in/out, and housings. Some people I got to meet for a few minutes included: Dick, K2RIW, Paul, W1GHZ, John WA4MUO/0; Tom, WA1MBA; Will, W0EOM; Don N0UGH; Peter G3PHO; Dave N4MW; Zack W1VT; and Bruce, N2LIV. Dave, N4MW had a very compact dual

band 10/ 24 GHz rig using one LO chain. I especially liked being able to talk with Ed Cole, AE7EB one of the earlier SBMS members now living in Alaska, who is trying to establish a microwave interest in the few hams in the Anchorage ham club. Well it was a couple of great days and nights and the checkbook really took a hit. I have some photographs to some how incorporate into the newsletter now and in the future. The next Microwave Update is slated for September 27 through 30, 2001 in Sunnyvale, CA sponsored by the 50 MHz and Up Group of Northern California at the Four Points Sunnyvale (formerly the Hilton Sunnyvale). A conference package is planned at \$237 for Thursday, Friday and Saturday for code "Microwave Update". The place is sold out Tuesdays and Wednesdays so expect \$150 to \$300 for arriving Wednesday night. Maybe another place for that night. Hotel information is Four Points Sunnyvale 1250 Lakeside Drive Sunnyvale CA 94086 480.738.4888 or 1-800-543-3322 or [www.Fourpointssvl.com](http://www.Fourpointssvl.com). There are a number of surplus houses within 10 miles so a tour is being setup for Thursday. Conference contacts are Jim Moss, N9JIM [N9jim@pacbell.net](mailto:N9jim@pacbell.net) and Will Jensby, W0EOM at [w0eom@aol.com](mailto:w0eom@aol.com) and the web site is [www.qsl.net/50up/](http://www.qsl.net/50up/). 73 Bill, WA6QYR

On 20 October 2000 Ed Munn, W6OYJ inquired of John Sortor, KB3XG organizer of the Microwave Update 2000 if there were any proceedings available. Ed received this reply-

Steve N2CEI of DownEast Microwave bought all of the extra copies. 43 total. You can order through Steve. We will consider getting more copies made when and if Steve runs out. Sorry you could not make it to Update. Maybe see you next year in Sunnyvale? 73xg

Hi Just thought I'd share some developments up here. My good friend Steve Tolley, KL7FZ, [Big Lake, Alaska] has acquired a 10 GHz transceiver [Gunnplexer with AFC] from e-bay and we have plans to try a

shot from Anchorage to Nikiski [60 miles]. Steve has a choice of trying from the Anchorage coast at Kincaid Park [100 foot above Cook Inlet] or 2200 foot elev. from Chugach State Park [though that requires climbing a very steep road]. I will likely set up on the 65-foot platform of my company's 120-foot microwave tower [LOS to the hillside location]. This shot is about half over water.

Curt Law, AL7LQ, is installing a 10 GHz beacon on Mt. Pillar ~1500 foot above Kodiak (city) on Kodiak Island pointed toward the Kenai Peninsula. I will be trying to pick up the beacon from Diamond Ridge [1400 foot] above Homer [133 miles entirely over water] and at home in Nikiski [233 miles]. The Anchorage hillside is about 50 miles further and it is even possible that a 10 GHz shot to Kodiak could be made under favorable atmospheric conditions [tropo-ducting].

During the winter there are frequent and persistent inversion layers over Cook Inlet. Cook Inlet is a body of salt water extending approx. 250 miles from the Gulf of Alaska coast north to Anchorage. Kodiak Island sits in the Gulf, offshore east of the Alaska Peninsula

It appears that my microwave demo at the hamfest in Anchorage last month is beginning to show some results!?! 73, Ed AL7EB@ptialaska.net.



The portable 6 foot dish built by Tommy, W6IFE shown here at Breckenridge Peak for one end of the 270 mile record shot on 3 and 5 GHz in the early 70's by Ed, W6OYJ (now owner of the dish) and Dick, K6HIJ.

Photo from K6MBL files.

San Bernardino Microwave Society is a technical amateur radio club affiliated with the ARRL having a membership of over 90 amateurs from Hawaii and Alaska to the east coast. Dues are \$15 per year which includes a badge and monthly newsletter. Your mail label indicates your call followed by when your dues are due. Dues can be sent to the treasurer as listed under the banner on the front page. If you have material you would like in the newsletter please send it to Bill WA6QYR at 247 Rebel Road Ridgecrest, CA 93555, [bburns@ridgecrest.ca.us](mailto:bburns@ridgecrest.ca.us), or phone 760-375-8566. The newsletter is generated about the 15th of the month and put into the mail at least the week prior to the meeting. This is your newsletter. SBMS Newsletter material can be copied as long as SBMS is identified as source.

San Bernardino Microwave Society newsletter

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USA

73's

Bill